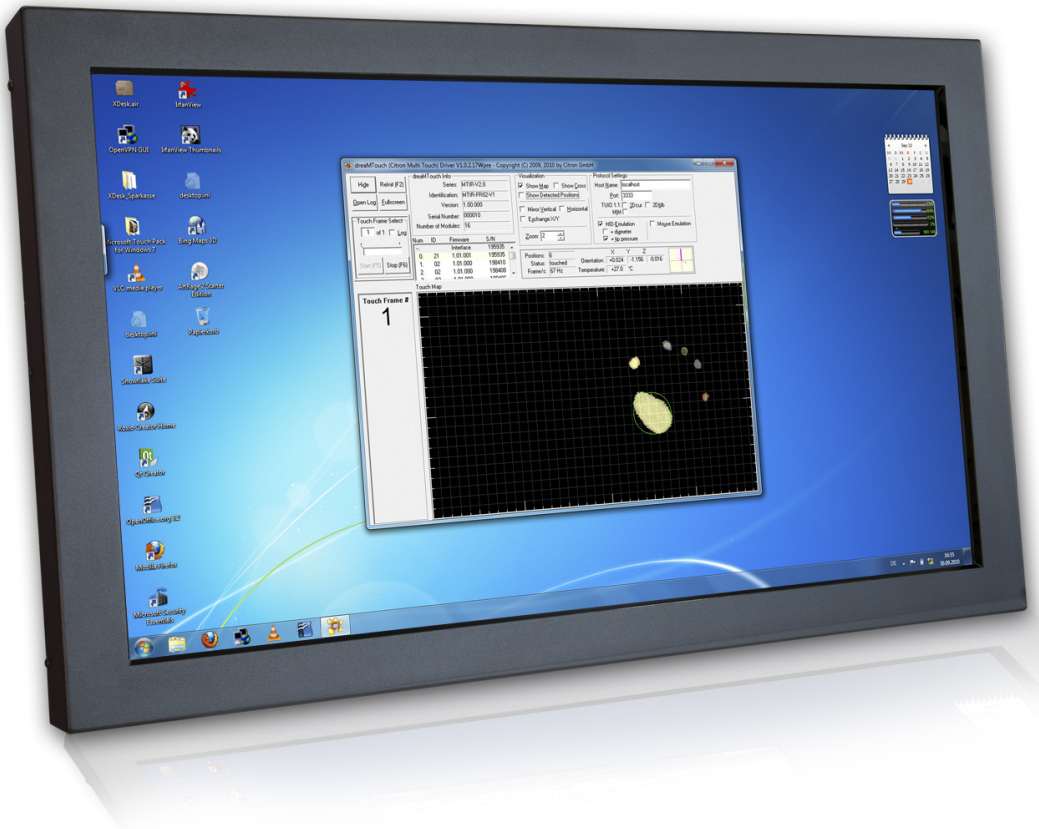
Citron®
Creative Industrial
Electronic Systems

32’’ MULTI-TOUCH-MONITOR

MTIR-FR02-V1

Operating Manual



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Introduction

The MTIR-FR02-V1 Multi-Touch-Monitor is comprised of a 32 inch Multi-Touch frame made by Citron GmbH, Germany mounted on an LCD-monitor PD-CP32AH made by Canvys, Germany.

This operating manual describes the set-up of the Multi-Touch-Frame.
For all other aspects reference the original manual of PD-CP32AH LCD screen

WARRANTY AND ALL WARRANTY CLAIMS ARE VOID IF INSTRUCTIONS IN THIS MANUAL ARE NOT OBEYED.

1 Precautions

Please carefully read these instructions before you start. Failure to follow these instructions may result in damage or personal injury

1.1. General Safety

- The unit must be set-up by authorized and qualified personnel only.
- Always obey relevant local safety regulations.
- Setting up should be performed by two persons.
- MTIR-FR02-V1 Multi-Touch-Monitor should only be used with the specified input voltage conditions (see section 7.1)
- Use only with suitably earthed mains sockets
- Any extension leads used should be of a suitable specification and suitably earthed
- Modification of protective earth connectors inside or outside the device is dangerous and not allowed.
- Do not use the device if it or it's cables are damaged in any way
- Unplug the device before attempting any cleaning or maintenance operations. Unplug the device when not in use for prolonged periods
- During cleaning do not permit liquids to enter the device.

  Do not use the device near water or other liquids, there is a danger of electrical shock.
- Take care to route all cables in a way that nobody can trip or get caught.
- Repair of MTIR-FR02-V1 by un-authorised personnel is not allowed. Electrical works should be undertaken by a professional electrician only.
- The device housing should not be opened or removed by un-authorised personnel.
- Safety features on the device should not be removed or by-passed
- No modifications or alterations are allowed for safety reasons
- Please also read and follow the precautions for the Canvys PD-CP32AH LCD-monitor .

1.2 Shipment and Transportation

Please check device for Damage and shortages immediately upon receipt. Claims for Damages or missing parts should be made immediately

To avoid damage, to the LCD screen or the front glass window, always transport the device in an upright position only.

1.3 Operation

The monitor with multi-touch functionality as described herein may be operated in a vertical or horizontal position.

By using appropriate stands the monitor can be on a suitable desk or table-top, it may also be integrated within a table, or mounted to a wall by using appropriate mounting fixtures.

For further installation instructions please see the original PD-CP32AH manual. When designing your mounting please be sure to allow for sufficient ventilation of the device

Any other use is allowed only with written permission from the manufacturer.

If the device is modified or used in any other way all warranty and warranty claims are void.

2 Package Contents

The cardboard box containing your new Multi-Touch-Monitor contains the following parts:

Contents	Qty
Multi-Touch-Monitor MITR-FR02-V1	1
Front bezel	1

Accessories kit:

DVI Cable	1
Power lead	1
USB Cable A/B	1
Magnetic Tape 85 cm	2
Magnetic Tape 54 cm	2

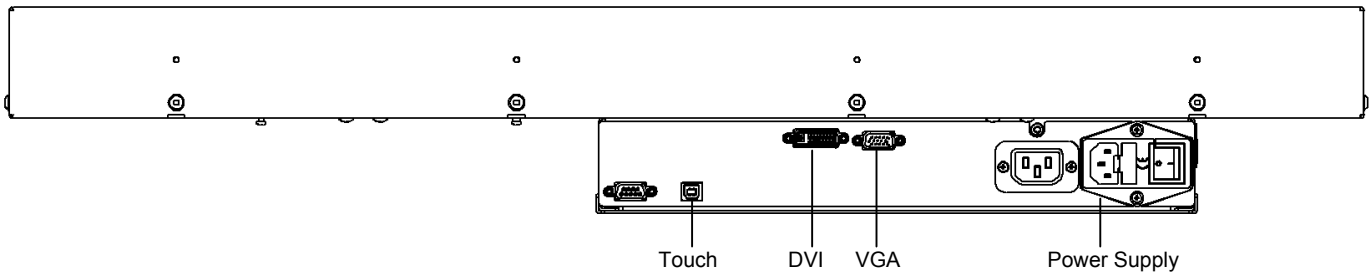
3 Installation

The following guidance must be observed when mounting the device. Failure to do so may result in breakage or damage to the unit. No warranty claims are accepted for damages caused by not following these instructions

- When mounting the multi-touch-monitor care should be taken not to obstruct the cooling air ventilation of the monitor. Ventilation openings must be kept clear. Environmental conditions as given in the Technical Data section of this manual should not be exceeded.
- Do not expose the multi-touch-monitor to direct sun light. Otherwise the LCD might overheat.
- Do not mount the multi-touch-monitor so that it gets twisted. The same is true for it's mounting fixtures,
- Please use only the specified mounting points to apply mechanical forces.
- This monitor complies to (EMC-directive). requirements for immunity to interference
  To achieve optimum immunity a separate earth connection for the housing is recommended.

Observe the Precautions in Chapter 1 of this manual.

3.1 Connections

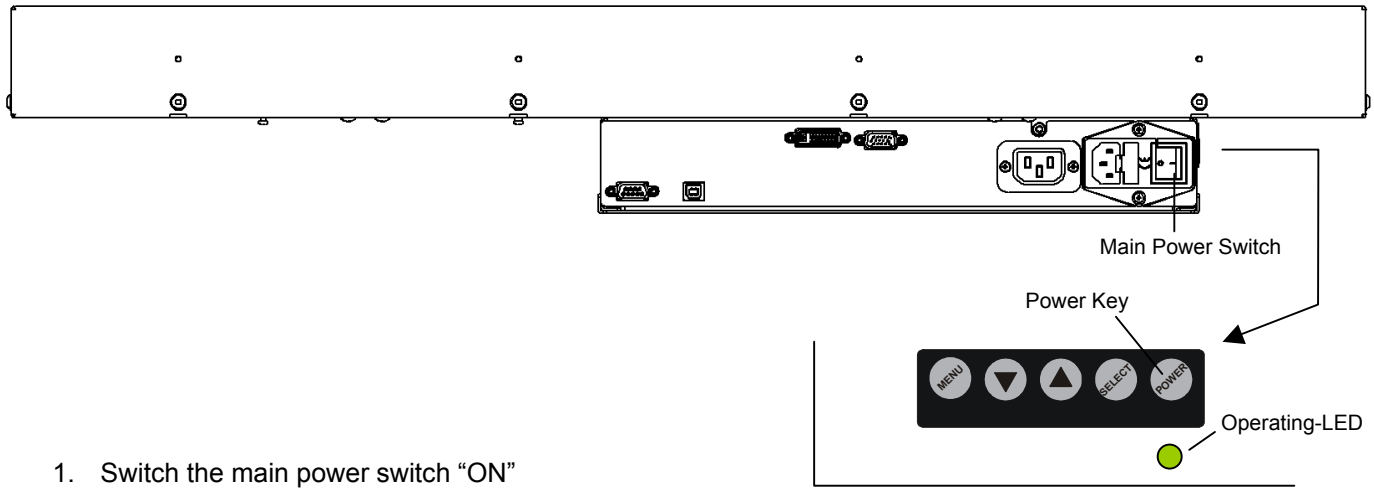


1. Disconnect your computer and the multi-touch-monitor from the power supply.
2. Connect a VGA- and/or DVI-video-cable (15 pin mini D-SUB / 24 pin DVI) to the video output of your computer and to the VGA and/or DVI-input of the Multi-Touch-Monitor.
3. Connect a USB cable between the "Touch" connector of the Multi-Touch-Monitor and a USB port of your computer.
4. Connect the power lead with the power supply socket of the Multi-Touch-Monitor and a suitably earthed mains socket.

HINT

Damaged or poorly inserted video or power leads can result in distorted or poor quality images or even damage to the device itself

3.2 Setting Up



1. Switch the main power switch “ON”

2. Start your computer

3 The Multi-Touch-Monitor is switched ON/OFF using the power key. Regular operation is indicated by a steady green light. If there is no video input or the monitor is on stand-by mode the LED emits red light.

3.3 DreaMTouch Software Driver

Before multi-touch operation the dreaMTouch software driver must be downloaded and installed on your computer.

All downloads can be found on:
www.citron.de, “*Downloads*“ menu; subsection “*drivers and utility programs*“.

· Download “*dreaMTouch Installation and Usage Guide*“ first and read it.

· Now download “*dreaMTouch Driver*“ package. Please download on the day of installation to be sure to get the latest driver version.

· Now install the driver as described in “*dreaMTouch Installation and Usage Guide*“.

You computer is now ready for multi-touch operation.

4 Operating the OSD

4.1 OSD-Operating-Keys

(**O**n-**S**creen-**D**isplay-Menue)

OSD-Menu Keys are located on the back of the Multi-Touch-Monitor. The keys have the following functionality:

Taste	Funktion
MENU	open main-menu Leave sub-menu / main-menu and save settings
▼	Sub-menu selection / Decrease values
▲	Sub-menu selection / Increase values
SELECT	Select function
POWER	Switch device between stand-by and operation (only when OSD inactive)

The device is switched off/on using the “POWER“-Key. During regular operations the indicator light is green, in all other cases it is red.

4.2 OSD-Main-Menu

OSD menu navigation, options and settings are described as follows:

Select the function groups within the six main-menu items using ▲▼- keys. The selected function group is highlighted. Activate the sub-menu by pressing the “Select”-key.

4.2.1 Input Select

Within the main-menu item “Input Select“ you can control the choice of input channels and the PIP modes. Use the keys “Select“, ▲▼ to navigate.

Main Input channel	VGA DVI

4.2.2 Image Adjustments

Within the main-menu item “Image Adjustments“ you can control image settings like brightness, contrast, etc.

Brightness	Use ▲▼-keys to adjust brightness
Contrast	Use ▲▼-keys to adjust contrast
Backlight	Use ▲▼-keys to adjust backlight brightness
Backlight mode	Valid only with ambient light sensor

4.2.3 Color Adjustments

Within the main-menu item “Colour Adjustments“ you can control colour settings like colour temperature etc

Autom. Colour Adjust	Automatic Adjustment of colour parameters
Switch sRGB	Simulates a CRT´s color space
Colour temperature	Use ▲▼-keys to select predefined colour temperature or individual settings

4.2.4 VGA Adjustments

Within the main-menu item “VGA Adjustments“ you can control the settings for the main input channel. This menu item can be selected only when VGA video input is active.

Auto Adjust	Press „Select“ to start automatic adjustment
Clock	Manual fine tune of clock settings
Phase	Manual fine tune of phase settings
H-Position	Adjustment of horizontal image position
V-Position	Adjustment of vertical image position

4.2.5 System Adjustments

OSD Timeout	Duration OSD displays after last key pressed
OSD Hor. Position	Control horizontal OSD position
OSD Vert. Position	Control vertical OSD position
OSD Direction	Mirror and rotate OSD
Reset	Load factory settings. All individual changes are lost!
Reset Colour Adjustments	Set colour settings to nominal values
Reset Geometry	Set image geometry to nominal values
Sharpness	Control image sharpness
Overlap Mode Select	Manual DOS mode settings

5 Cleaning

CAUTION: Disconnect the Multi-Touch-Monitor from power supply before cleaning. Wait until all parts are completely dried before re-connecting power.

5.1 Cleaning of Monitor Parts

Clean the monitor surface using a dampened cloth. Take care that no liquid enters the device. Clean the device surfaces with a smooth, non scratching lint-free cloth. Do not use any cleaning agents or paper towels.

5.2 Cleaning of Glass Window

To clean the glass window commercially available glass cleaning agents may be used. Clean the device surfaces with a clean, soft, non-scratching, lint-free cloth.

CAUTION: Do not use sharp or abrasive cleaning agents or alcohol. They will destroy the surface of the infrared multi-touch optics.

6 Trouble-shooting

Error	Reason	Corrective
Operating LED is off	- Main power switch is off - No power supply	- Switch on main switch - Check power chord - Check wall plug
No image	- cabling is missing or faulty - Main power switch is off - Monitor in stand-by mode - Wrong input channel selected - Image is not visible - No video input	- Check DVI or VGA cable - Check power chord - Switch on main switch - Switch on using „power“-key - Use OSD to select other input channel - Use OSD to adjust brightness and contrast - Adjust graphics card configuration - Check screen saver and energy saver settings
Poor quality image	- Bad or wrong cabling - Unsupported graphics mode	- Check both ends of video cable - Check if graphics mode of video cards is supported by monitor. - Check if monitor is operated at native resolution (1920 x 1080 at 60 Hz) Smaller resolutions get scaled to full size causing blur due to interpolation. This is not a device fault! Further steps: - Execute „Auto Adjust“. - Use the OSD settings „H-Total“ and „Phase“ until image is clear and sharp. (After a change of graphics mode settings might have to be repeated)
Picture is shown with wrong size or not centered	- Size or Position manipulated in OSD - Unsupported graphics-mode	- Check horizontal and vertical position in OSD - Check if graphics mode of video cards is supported by monitor.
OSD-Error “Signal out of Range“	- Unsupported graphics-mode	- Check if graphics mode of

		video cards is supported by monitor.
Touch is not working	- Some cabling is missing or loose. - Monitor has switched off automatically - Driver is not installed correctly	- Check USB connection at the monitor. - Check USB connection at the PC - Remove USB cable for about 10 seconds and plug it in again - Reinstall driver, look at “dreaMTouch Installation and Usage Guide“
Touch operation unstable	- Poor USB cable quality - USB cable too long	- Use USB port on back side of computer instead of front side port - Take care not to use more than allowed maximum of 5 m, high quality, USB cable

7 Technical Data

7.1 Electrical

Power Supply:	100 – 240V AC, 50 / 60Hz
Current Consumption:	4 A max.
Monitor Interface:	Single Link DVI, analog VGA
Touch Interface:	USB1.1 (full speed)

7.2 LCD Screen

Panel Type:	AU Optronics Colour TFT LCD Panel
Display Size:	32 “ / 80,1cm
Resolution:	max. 1920 x 1080, max. 85Hz
Colours:	16,2 Mio. (8 Bit)

7.3 Touch Function

Number of simultaneous touch points:	Up to 32
Size of touch point	> 8 mm
Resolution:	< 2 mm
Supported Operating Systems:	Microsoft® Windows XP® to Microsoft Windows 7® 32 bit and 64 bit *(Linux® and Apple Macintosh® support under development)*
Communication Protocol:	Driver interfaces for user applications: • TUIO 1.1 *2Dcur* und *2Dblb* Profiles • Windows 7 Multitouch HID Emulation • Windows XP Mouse Emulation
Max. Scan Speed:	16 ms / scan (62 Hz)

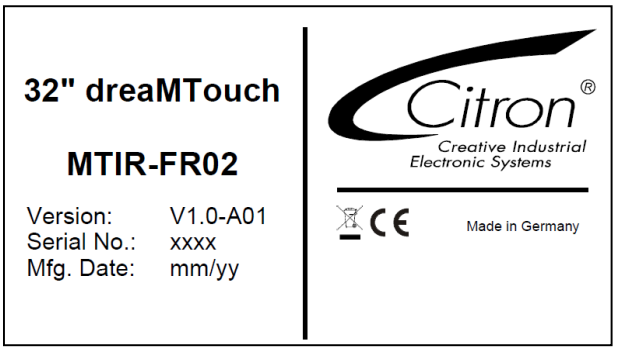
7.4 Environmental

Operating Temperature:	0°C to 35°C
Humidity (operating):	20% to 80% (non condensing)

7.5 Mechanik

Touch monitor dimensions:	796 × 486 × 125 mm
Front bezel dimensions:	846 x 536 x 1.5 mm
Surface finish:	Black structured powder coating (RAL 9011)
Active Area:	698.4 x 392.9 mm
Window	4 mm anti-reflective, laminated security glass
Weight	~ 25 kg
Monitor:	PD-CP32AH

8 Product Label



9 Ordering Information

Order Number	Description
MTIR-FR02-V1-A01	32” dreaMTouch including LCD-monitor

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